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ABSTRACT

This study compared the scores of on-campus and off-campus students taking a common final examination in similar graduate education courses offered by the Abraham S. Fischler Center for the Advancement of Education at Nova Southeastern University. Data were obtained from final examinations administered in courses covering methods for teaching secondary English, mathematics, science, and social studies on June 1, 1996, at Fort Lauderdale, Miami, Orlando, Tampa, and West Palm Beach. It found that the 36 off-campus students had higher average scores on the 30 common examination questions than their 25 on-campus counterparts. The on-campus students had a mean score of 23.24, while the off-campus students had a mean score of 25.89. (Contains 17 references.) (MDM)

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# RESULTS FROM A COMMON FINAL EXAMINATION: A COMPARISON BETWEEN ON-CAMPUS STUDENTS AND OFF-CAMPUS STUDENTS

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# RESULTS FROM A COMMON FINAL EXAMINATION: A COMPARISON BETWEEN ON-CAMPUS STUDENTS AND OFF-CAMPUS STUDENTS

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**Report 96-17**

## EXECUTIVE SUMMARY

The purpose of this study was to provide a comparison between on-campus students and off-campus students through results of a common final examination. Analyses are restricted in focus to the Graduate Teacher Education Program (GTEP) offering of EDU 521-524 (EDU 521, Methods for Teaching Secondary English; EDU 522, Methods for Teaching Secondary Mathematics; EDU 523, Methods for Teaching Secondary Science; EDU 524, Methods for Teaching Secondary Social Studies) during 1996 Winter Term II. Data were obtained from final examinations administered on June 1, 1996, at Fort Lauderdale (two separate offerings), Miami, Orlando, Tampa, and West Palm Beach.

After analysis of answers to the 30 common final examination questions given to all EDU 521-524 students, it was observed that off-campus students (N=36) had higher scores (i.e., more correct answers from the 30 common questions) on the final examination than their on-campus (N=25) counterparts (alpha $\leq$ .01). On-campus students had approximately 23 correct answers to the 30 common questions, while off-campus students had approximately 26 correct answers to the same set of questions.

The University's *Master Plan* (1996) includes the recommendation that additional resources should be provided to develop a distance education research agenda. As part of that agenda, benchmark comparisons between on-campus students and off-campus students to common assessment measures will help expand and support the University's 25-year history with distance education.

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# INTRODUCTION

## Background

The Abraham S. Fischler Center for the Advancement of Education initiated the first off-campus degree programs at Nova Southeastern University, in 1972, when the field-based Ed.D. Program in Educational Leadership and the field-based Ed.D. Program for Community College Faculty and Administrators were both implemented. As identified in *Status Report on Institutional Effectiveness: 1995 - 1996* (1996, p.3-4), the Center is dedicated to the training and continuing support of teachers, administrators, trainers, and others working in education and related helping professions. The Center administers six programs: three at the doctoral level and three at the master's or specialist level.

**The National Ed.D. Program for Educational Leaders** enrolls K-12 school administrators and focuses on the acquisition of leadership skills needed to improve the nation's school systems.

**The Ed.D. Program for Higher Education** offers an integrated program of formal instruction, supervised study, and applied research, with specialties in adult education, computing and information technology, health care education, higher education, and vocational, technical, and occupational education.

**The Programs in Education and Technology** serve to improve the lives of children and adults by improving the leadership skills of the educators, trainers, and other professionals who work with them. Specializations in curriculum development and systemic change, management of programs for children and youth, and special services for children and youth are offered at the Ed.D. level. Study in instructional technology and distance education is offered at both the M.S. and Ed.D. levels.

**The Graduate Teacher Education Program** offers an array of 18 major fields of study in teacher education for practitioners at the master's and the educational specialist degree levels, focusing on the improvement of professional practice, the application to practice of current research and theory, and the acquisition and enhancement of leadership skills.

**The Master's Program in Speech-Language Pathology** provides the coursework and clinical experiences needed to obtain Florida licensure as a speech pathologist, the speech-language impaired certification coverage for work in Florida schools, and the Certificate of Clinical Competence awarded by the American Speech-Language Hearing Association.

**The Master's Program in Life Span Care and Administration** offers programs for child care, youth care, and elder care administrators, family support and applied addiction professionals. Each contains integrated studies in leadership, management, public policy, human development, and human dynamics, as these apply to the particular clientele.

To meet its mission, the Center offers educational programs designed to meet the needs of the practitioner and makes a special commitment to provide educational programs in those geographic areas in which there are few resources for the training and professional support of practitioners. Because of this commitment, distance education is pervasive throughout the Center as services are provided to the 7,286 students (unduplicated, cumulative headcount enrollment from July 1, 1995 to June 30, 1996; *Research and Planning Weekly Enrollment Report*, July 29, 1996) enrolled in courses, study areas, and seminars conducted in 49 cities in 20 states and Canada.

To place these programs and the use of distance education teaching modalities into context, it is important to recall that these and other off-campus degree programs were integral degree offerings when the University received reaffirmation of accreditation from the Southern Association of Colleges and Schools in 1975 and 1985 (*Nova Southeastern University Fact Book;* 1996, p. 9-11). It may also be helpful to recall that current competitors in distance education were among the University's detractors when peer review of distance education activities were originally conducted (*Master Plan*, 1996, p.64).

## Purpose of This Study

Extending the evaluations contained in annual reports, such as *Quality Improvement Plans, Administrative and Educational Support Services: 1995-96* (1996) and *Status Report on Institutional Effectiveness: 1995 - 1996* (1996), Research and Planning in cooperation with those centers most involved with distance education prepared a plan (Memorandum from Tom MacFarland to John Losak; September 22, 1995) to survey both students and graduates as reflected in the following reports:

- Research and Planning Report 96-02; *Graduates of Nova Southeastern University's Undergraduate Programs Tell Us About Their Undergraduate Experience.*
- Research and Planning Report 96-03; *Place of Class Attendance at Nova Southeastern University: Calendar Years 1990 to 1994.*
- Research and Planning Report 96-05; *Graduates of the Abraham S. Fischler Center for the Advancement of Education Reflect on Their Experience With Nova Southeastern University.*

- Research and Planning Report 96-06; *Graduates of the School of Business and Entrepreneurship Reflect Upon Their Academic Experiences.*

- Research and Planning Report 96-07; *Graduates of the School of Computer and Information Sciences Offer Judgment on Their Experience With Nova Southeastern University.*

- Research and Planning Report 96-08; *South Florida vs. Other Locations: Comparing Student Responses to a Satisfaction Survey.*

- Research and Planning Report 96-12; *Students in the Abraham S. Fischler Center for the Advancement of Education Respond to a Satisfaction Survey: A Comparison Between On-Campus Students and Off-Campus Students.*

- Research and Planning Report 96-13; *Students in the School of Business and Entrepreneurship Respond to a Satisfaction Survey: A Comparison Between On-Campus Students and Off-Campus Students.*

- Research and Planning Report 96-14; *Students in the James M. Farquhar Center for Undergraduate Studies Respond to a Satisfaction Survey: A Comparison Between On-Campus Students and Off-Campus Students.*

- Research and Planning Report 96-15; *Students in the School of Computer and Information Sciences Respond to a Satisfaction Survey: Outcomes from an Academic Center Using Computer-Mediated Communication.*

These reports were useful as a means of gauging student satisfaction with academic programs and services and then comparing results between on-campus students and off-campus students. As important as student satisfaction with academic programs and services may be, these reports lacked the added dimension of comparing achievement results between on-campus students and off-campus students on a common measure. The purpose of this study is to provide comparisons between on-campus students and off-campus students to a common final examination.

## METHODOLOGY

This study is restricted in focus to the Graduate Teacher Education Program (GTEP) offering of EDU 521-524 (EDU 521, Methods for Teaching Secondary English; EDU 522, Methods for Teaching Secondary Mathematics; EDU 523, Methods for Teaching Secondary Science; EDU 524, Methods for Teaching Secondary Social Studies) during 1996 Winter Term II. Data were obtained from final examinations administered on June 1, 1996, at the following sites:

- Fort Lauderdale, with one professor teaching a class of English majors (N = 12) and another professor teaching a blended class of Mathematics and Science majors (N = 13)

- Miami, with one professor teaching a blended class of English, Mathematics, Science, and Social Studies majors (N = 15)

- Orlando, with one professor teaching a blended class of English, Mathematics, Science, and Social Studies majors (N = 5)

- Tampa, with one professor teaching a blended class of English, Mathematics, Science, and Social Studies majors (N = 6)

- West Palm Beach, with one professor teaching a blended class of English, Mathematics, Science, and Social Studies majors (N = 10)

Although the course was offered at different sites and taught by different professors, it is important to note that there was a high degree of commonality:

- A lead professor maintained communication between the geographically dispersed faculty.

- Teaching modality was basically the same at all sites. Over a period of nine Saturday class meetings, professors had approximately 36 contact hours with students for lecture, class discussion, and related activities.

- All professors had, and were expected to refer to, a common study guide.

- All students used the same text for the core component of EDU 521-524.

As the course was developed, faculty agreed that it would be beneficial to have a set of common final examination questions for the core component of the course, and separate questions for each of the four majors. This study is based on analysis of the 30 common final examination questions given to all EDU 521-524 students. These 30 questions were related to the core component of EDU 521-524 and they are totally separate from breakout questions that were specific to each of the four different majors.

## RESULTS

Because this study was centered on comparisons between on-campus students and off-campus students to results from a common final examination, data were collapsed into two subgroups:

- Data from the two Fort Lauderdale sessions of EDU 521-524 were organized into the on-campus subgroup (N = 25).
- Data from the Miami, Orlando, Tampa, and West Palm Beach sessions of EDU 521-524 were organized into the off-campus subgroup (N = 36).

Comparisons were then made to the number of correct answers from the 30 common final examination questions given to all EDU 521-524 students. After analysis of the data, it was observed that off-campus students had higher scores (e.g., more correct answers from the 30 common questions) on the final examination than their on-campus counterparts (alpha $\leq$ .01):

- On-campus . . . . . Mean number of correct answers = 23.24 (SD = 2.98)
- Off-campus . . . . . Mean number of correct answers = 25.89 (SD = 3.94)

Although it is beyond the purpose of this study to present an item analysis of exam questions, further analyses revealed that on-campus students had significantly fewer correct responses (alpha $\leq$ .05) than off-campus students to the following questions and topics:

- Question 01 . . . . . Performance objectives
- Question 09 . . . Application in Bloom's taxonomy of the cognitive domain
- Question 17 . . . . . Wait time when questioning students
- Question 18 . . . . . Teacher response to incorrect answers
- Question 25 . . . . . Formative assessment
- Question 26 . . . . . Goals
- Question 28 . . . . . Advance organizer

There were no questions where off-campus students had significantly fewer correct responses (alpha $\leq$ .05) than on-campus students.

## SUMMARY

Prudence, and possibly extreme caution, should be used to place the results of this study into any perspective about distance education. This study represents results from only one offering of a course. By no means does this study present results from a larger and more comprehensive assessment of final examination scores for on-campus and off-campus students. Even with this caution, it is intriguing to note how the results of this study parallel results from *Graduates of the Abraham S. Fischler Center for the Advancement of Education Reflect on Their Experience With Nova Southeastern University* (1996) and *Students in the Abraham S. Fischler Center for the Advancement of Education Respond to a Satisfaction Survey: A Comparison Between On-Campus Students and Off-Campus Students* (1996). These studies provided self-reported evidence that off-campus students are able to function at very acceptable levels, and that enrollment in a distance education mode does not limit performance. Indeed, for approximately two-thirds of all survey statements associated with *Students in the Abraham S. Fischler Center for the Advancement of Education Respond to a Satisfaction Survey: A Comparison Between On-Campus Students and Off-Campus Students* (1996), off-campus students provided higher ratings than on-campus students.

Although this study provided evidence that off-campus students in EDU 521-524 during 1996 Winter Term II had higher final examination scores than their on-campus counterparts, far more work is needed for the University to expand the scope and incidence of this type of assessment activity. Hedegaard (1996, p.J-3) identified that "academic performance of students in the [computer-mediated online education] program was equal to or better than that of its classroom-based students in both quantitative and non-quantitative cognitive areas." Although there are many anecdotal reports in the literature about the efficacy of distance education, Hedegaard (1996) is one of the few references where distance education students are compared to campus-based students on results gained from common performance assessments.

The University has a 25-year history with distance education. During this time, the University has been able to develop a unique infrastructure that provides educational opportunities and services to students at 79 sites in Florida, 66 sites in 21 other states in the United States, and 13 sites in five foreign nations (*Off-Campus Program Directory*, 1996). As other educational institutions enter the distance education market, it would be helpful for the University to give attention to the recommendation in the *Master Plan* (1996, p.69) calling for the investment of additional resources in support of more thorough assessments of distance education. Whenever possible, benchmark comparisons between teaching modalities and off-campus sites, with comparisons based on common assessment measures, will help in assessing student learning outcomes related to the various modalities.

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